P. J. RAYMOND AND G. ADAMS.

VEHICLE JACK.

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1,425,542.

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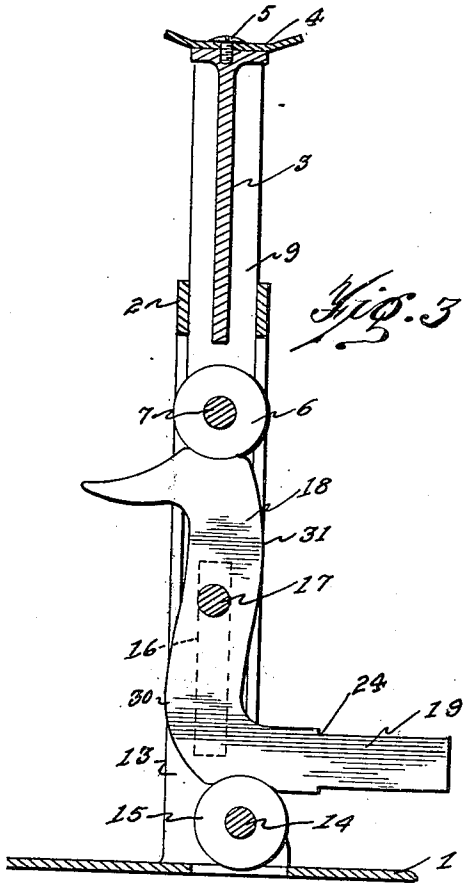


Fig. 3

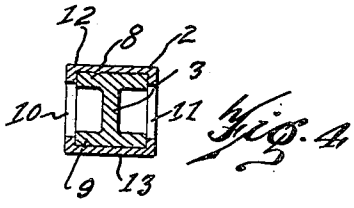


Fig. 4

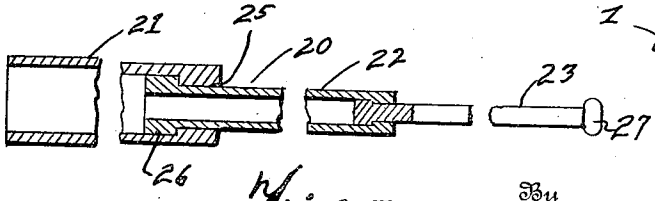


Fig. 5.

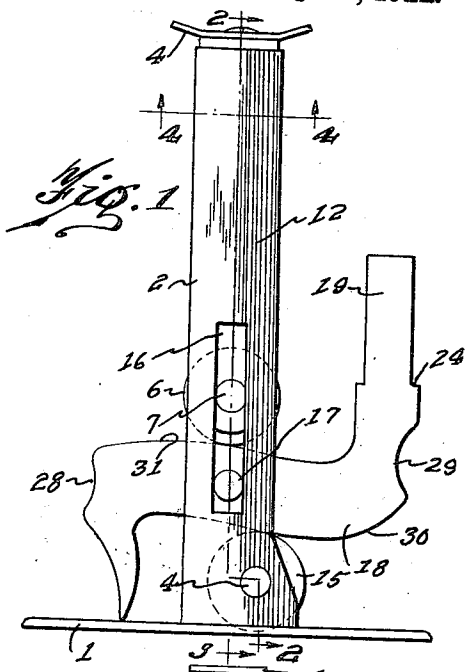


Fig. 1

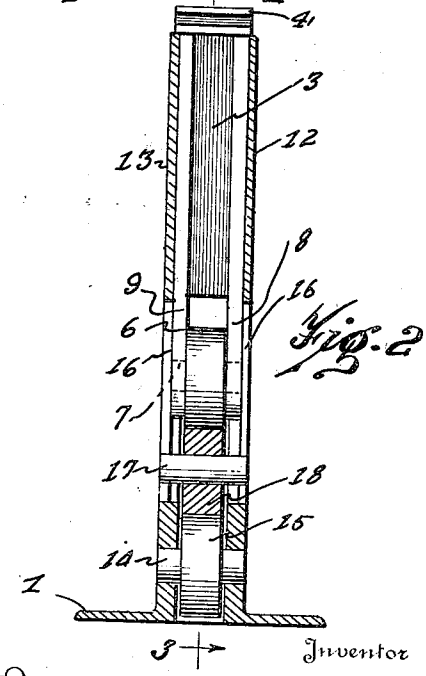


Fig. 2

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VEHICLE JACK.

1,425,542. Specification of Letters Patent. Patented Aug. 15, 1922.

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To all whom it may concern:

Be it known that we, PROSPER J. RAYMOND and GEORGE ADAMS, citizens of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Vehicle Jacks, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to vehicle jacks and the principal object of the invention is to provide a jack which may be set at its extreme extended position with one movement of the handle thus doing away with the objectionable necessity of raising the jack a notch at a time on each movement of the handle. A further object of the invention is to provide a jack of the character described which is compact in form and which will not easily get out of order. A further object of the invention is a jack of the character described which may be moved to its extreme extended position upon one downward movement of the handle and which when extended to position is locked therein and may be lowered by a single upward movement of the said handle. These objects and the several novel features of the invention are hereinafter more fully described and claimed and the preferred form of construction by which these objects are attained is shown in the accompanying drawings in which—

Fig. 1 is a side elevation of the jack in position for operation.

Fig. 2 is a section taken on line 2—2 of Fig. 1.

Fig. 3 is a section taken on line 3—3 of Fig. 2 and showing the jack locked in extended position.

Fig. 4 is a section taken on line 4—4 of Fig. 1.

Fig. 5 is a section through the telescoping handle by means of which the jack is operated.

As is shown in Fig. 1 the jack is provided with a base 1 having an upright portion 2 formed integrally therewith. The upright portion 2 is square in form and hollow as shown in Fig. 4, to receive the member 3 of the shape of an I-beam which is adapted to be reciprocated within the hollow member 2. On the head or upper end of the member 3 is a member 4 secured thereto by the screw 5 and adapted to engage the axle or other part of the vehicle to be lifted. At the lower end of the member 3 the center portion of the I-beam is cut away and a pulley 6 is supported on the stub shaft 7 between the side members 8 and 9 of the member 3. The member 2 is also cut away at either side at 10 and 11 and between the sides 12 and 13, at the lower end of the member 2 is a stub shaft 14 upon which the roller 15 is rotatably mounted. Each side 12 and 13 of the member 2 is provided with a slot 16 of a width equal to the diameter of the pin 17 on the portion 18 of the lever 19. This end 18 of the lever 19 is of, what may be called, a goose-neck form, the curves of this end of the lever being important in raising the jack. A telescoping lever or handle 20 is provided as shown in Fig. 5, consisting of three members 21, 22 and 23, one end of the member 21 being adapted to slip over the lever 18 at 19 and engage the shoulder 24 of the said member 18. The member 21 is provided with an internal annular flange 25 against which the flange 26 of the member 22 engages when extended, the members 22 and 23 being secured together in the same manner and the lever 23 being provided with a ball end 27 which provides a handle for the lever.

In operation the device is set as shown in Fig. 1 and is positioned under the axle of a vehicle whereupon the end 21 of the member 20 is positioned over the upwardly extending end 19 of the member 18. By extending the handle to its full length the operator by a downward movement of the handle swings the member 18 to the position shown in Fig. 3 the member 18 pivoting on the stub shaft 17 which moves up through the slot 16 during the operation. It will be noted that during this movement of the member 18 the face 30 of the said member rides on the roller 15 and the roller 6 rides up the face 31 of the said member due to the powerful leverage of the member 18 against the roller 6. As will be noted from Fig. 1 the member 18 is provided with a notch 28 at the upper end which is adapted to engage the roller 6 when in extended position as shown in Fig. 3, and the member 18 is also provided with a notch 29 at the lower end adapted to engage the roller 15 when in the said extended position. By

thus providing notches 28 and 29 by which the roller 6 and 15 are engaged, a positive lock is provided for the device which can only be unlocked by upward movement of the handle tending to return the member 18 to the position shown in Fig. 1.

From the foregoing description it becomes evident that the device, while of a simple nature is very efficient in operation, is of cheap manufacturing cost, and accomplishes the objects desired.

Having thus briefly described our invention, its utility and mode of operation, what we claim and desire to secure by Letters Patent of the United States is—

1. In a vehicle jack, a body member provided with a base, a member vertically reciprocable in the said body member, a roller rotatably mounted in the lower end of the said reciprocable member, a roller rotatably mounted in the lower end of the body member, two opposite sides of the body being provided with slots, a lever having an end bent at approximately a right angle, each opposite face therefor forming an ogee curve, and engaging the respective roller, and a pivot pin centrally positioned between the ends of the ogee curved portion and riding in the slots in the said body member.

2. In a vehicle jack, a body member provided with a base, a member vertically reciprocable in the said body and being similar to an I-beam in cross section, a roller rotatably mounted in the lower end of the said reciprocable member, a revoluble head on the said reciprocable member, and additional roller rotatably mounted in the lower end of the body member adjacent the base, two opposite sides of the body member being slotted, a lever having an end bent at approximately a right angle, each opposite face thereof forming an ogee curve and engaging the respective roller and a pivot pin centrally positioned between the ends of the ogee curved portion and riding the slots in the said body.

3. In a vehicle jack, a base, a body formed of two upright members secured together at the upper end, a vertically extending member reciprocably mounted in the said body, the two sides of the body being slotted, a roller rotatably mounted in the lower end of the said reciprocable member, an additional roller rotatably mounted between the two sides of the body adjacent the base, a lever having an end bent at approximately a right angle adapted to be positioned between the two rollers and between the two sides of the body, the said bent portion forming an ogee curve and a pivot pin centrally positioned between the ends of the ogee curved portion and riding in the slots in the said body member.

4. In a vehicle jack, a body formed of two upright extending members secured together at the upper end, a base at the lower end of the said members, a member vertically reciprocable between the two sides of the body and having a head thereon, the two sides of the body being each provided with a vertically extending slot, a roller rotatably mounted in the lower end of the said reciprocable member, an additional roller rotatably mounted between the two sides of the body adjacent the base, the axes of the two rollers being parallel, a lever having an end bent at approximately a right angle adapted to be positioned between the two rollers, each opposite face of the said bent portion forming an ogee curve and engaging the respective roller and a pivot pin centrally positioned between the ends of the ogee curved portion and riding in the slots in the said body member.

5. In a vehicle jack, a body member provided with a base, a member vertically reciprocable in said body member, a rotatable roller fixedly positioned at the lower end of the reciprocable member, a rotatable roller fixedly positioned at the lower end of the body member, said body member having a vertical slot in the two opposite sides, a lever having an end bent at approximately a right angle, each opposite face thereof having the form of an ogee curve, said curved faces engaging the respective rollers, and a pivot pin fixed centrally between the heel and toe of the bent end of the lever and riding in the said vertical slots of the body member, the said bent end of the lever having an arcuate notch or recess at the heel and at the forward end in which the respective rollers may rest when the lever has been turned on its pivot.

In testimony whereof, we sign this specification.

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